Exhibit 1

THIS EXHIBIT HAS BEEN REDACTED IN ITS ENTIRETY

Exhibit 2

THIS EXHIBIT HAS BEEN REDACTED IN ITS ENTIRETY

Exhibit 3

THIS EXHIBIT HAS BEEN REDACTED IN ITS ENTIRETY

Exhibit 4

TITLE OF THE INVENTION

Solid Golf Ball

This invention relates to solid golf balls having improved flying performance.

BACKGROUND OF THE INVENTION

In general, solid golf balls include a one-piece golf ball which is integrally molded in its entirety, a two-piece golf ball having a core enclosed in a cover, and a multi-layered golf ball having a core enclosed in a cover through one or more intermediate layers.

These solid golf balls have an elastic portion in the form of a molded and vulcanized rubber compound as a portion, that is, a core in the case of multi-layered golf balls or as their entirety in the case of one-piece golf balls. For the purpose of improving the repulsion coefficient and impact resistance of the prior art rubber compositions from which the elastic portion was formed, attempts were made to blend a monomer having an unsaturated bond, typically an α,β-ethylenically unsaturated carboxylic acid metal salt as a co-crosslinking agent in polybutadiene or a similar base rubber. The co-crosslinking agent will graft or crosslink to the backbone of polybutadiene rubber under the action of a peroxide or similar co-crosslinking initiator, resulting in a three-dimensional crosslinked polymer, which can provide an adequate degree of hardness and durability for one-piece golf balls or multi-layered golf ball cores. Therefore, one-piece golf balls formed from rubber compositions having such a co-crosslinking agent blended and multi-layered golf balls having cores formed from rubber compositions having such a co-crosslinking agent

blended are known to exhibit satisfactory flying performance and durability.

Golf players have a continuous demand for better flying performance and it is thus desired to develop golf balls having further improved flying performance.

SUMMARY OF THE INVENTION

Therefore, an object of the invention is to provide a golf ball having further improved flying performance.

Searching for an optimum additive for a rubber composition containing a base rubber, typically polybutadiene and an unsaturated carboxylic acid metal salt as a co-crosslinking agent, the inventors have found that when an organic sulfur compound and/or a metal-containing organic sulfur compound is added to the rubber composition, there is obtained a rubber composition which can be vulcanized into a rubbery elastomer having improved rebound resilience. If a one-piece golf ball or a multi-layered golf ball core is formed from this rubber composition, the resulting solid golf ball exhibits an increased initial velocity upon hitting and improved flying performance. The present invention is predicated on this finding.

According to the present invention, there is provided a solid golf ball comprising a rubber composition containing a base rubber, an unsaturated carboxylic acid metal salt, and a sulfur compound selected from the group consisting of an organic sulfur compound and a metal-containing organic sulfur compound.

In one form, the ball is a one-piece golf ball which is entirely formed of the present rubber composition.

In another form, the ball is a multi-layered golf ball comprising a core and a cover enclosing the core, wherein the core is formed of the present rubber composition. The core may be enclosed in the cover directly or through an intermediate layer.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a cross section of a one-piece golf ball.

FIG. 2 is a cross section of a two-piece golf ball.

DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 shows in cross section a one-piece golf ball 11. FIG. 2 shows a two-piece golf ball 21 comprising a core 23 coated with a cover 25. A plurality of, usualy 200 to 600, dimples are formed on the surface of the golf balls, although they are not shown in FIGS. 1 and 2.

The solid golf ball of the present invention is a one-piece golf ball or a multi-layered golf ball in which the one-piece golf ball or the core of the multi-layered golf ball is formed from a rubber composition comprising a base rubber, an unsaturated carboxylic acid metal salt, and an organic sulfur compound and/or a metal-containing organic sulfur compound.

The base rubber used herein may be any desired rubber which is commonly used in conventional one-piece golf balls and cores of multi-layered golf balls. Polybutadiene rubbers, especially poly(1,4-butadiene) rubbers containing at least 40 mol%, preferably 80 to 100 mol% of cis-1,4 bond are preferred because of high rebound resilience, extrusion moldability, and high strength after vulcanization. If desired, the poly(1,4-butadiene) rubbers may be blended with natural rubber, polyisoprene rubber, styrene-butadiene rubber or the like. It is desired that at least 80% by weight of poly(1,4-butadiene) rubber be present in the base rubber because base rubbers containing less amounts of poly(1,4-butadiene) rubber often fail to take advantage of the rebound resilience of polybutadiene rubber.

The metal salt of unsaturated carboxylic acid is blended as a co-crosslinking agent. Examples include zinc and magnesium salts of unsaturated fatty acids having 3 to 8 carbon atoms, such as acrylic acid, methacrylic acid, maleic acid, and fumaric acid, with the zinc salts of acrylic and

methacrylic acid being most preferred. The unsaturated carboxylic acid metal salt may be blended in a rubber either as a preformed metal salt or by introducing an α,β-unsaturated carboxylic acid and a metal oxide or hydroxide into the rubber composition and allowing them to react in the rubber composition to form a metal salt. The unsaturated carboxylic acid metal salt may be blended in any desired amount, but preferably in amounts of about 25 to about 40 parts by weight per 100 parts by weight of the base rubber.

The rubber composition used in the manufacture of the solid golf ball of the invention contains an organic sulfur compound and/or a metal-containing organic sulfur compound in addition to the base rubber and the unsaturated carboxylic acid metal salt. Examples of the organic sulfur compound include thiophenols such as pentachlorothiophenol, 4-t-butyl-o-thiocresol, 4-t-butyl-p-thiocresol, and 2-benzamidothiophenol, thiocarboxylic acids such as thiobenzoic acid, and sulfides such as dixylyl disulfide, di(o-benzamidophenyl) disulfide and alkylated phenol sulfides. Examples of the metal-containing organic sulfur compound include zinc salts of the above-mentioned thiophenols and thiocarboxylic acids. The sulfur compounds may be used alone or in admixture of two or more of them. The sulfur compound is preferably blended in amounts of from about 0.05 to about 2 parts by weight, more preferably from about 0.1 to about 0.5 parts by weight per 100 parts by weight of the base rubber.

The rubber composition of the invention may further contain a co-crosslinking initiator. Preferred examples of the co-crosslinking initiator include organic peroxides, such as dicumyl peroxide, t-butylperoxybenzoate, di-t-butylperoxide, 1,1-bis(t-butylperoxy)-3,3,5-trimethylcyclohexane, n-butyl-4,4-bis(t-butylperoxy)valerate, 2,2'-bis(t-butylperoxy-isopropyl)benzene, and 2,5-dimethyl-2,5-di(t-butylperoxy)hexene, with the dicumyl peroxide being

most preferred. The initiator may be blended in amounts of about 0.5 to about 3 parts by weight, preferably about 1 to about 2.5 parts by weight per 100 parts by weight of the base rubber.

Also employable is a filler. Preferred examples of the filler include metal oxides such as zinc oxide and magnesium oxide. It may be blended in amounts of about 10 to about 80 parts by weight per 100 parts by weight of the base rubber. If desired, the rubber composition can additionally contain a plasticizer, an antioxidant, and any other additives which are generally employed in the preparation of one-piece balls or cores of multi-layered balls. Their amounts may be determined without undue experimentation.

The solid golf ball of the invention may be prepared by molding the above-formulated rubber composition as formulated above into a desired spherical shape, that is, a ball in the case of a one-piece ball or into a core in the case of a multi-layered ball and vulcanizing the rubber by heating. The manufacture may be in accord with conventional method and conditions.

When multi-layered golf balls such as two-piece balls are manufactured, the core is coated with a cover. The cover material used herein may be selected from commonly used cover materials, for example, ionomers such as Surlyn®, polyesters, and nylons. The cover usually has a thickness of 0.5 to 2.5 mm.

The core may be enclosed in the cover directly or through an intermediate layer.

The present invention may be applied to any type of golf ball including small balls having a diameter of at least 41.15 mm and a weight of up to 45.92 g, and large balls having a diameter of at least 42.67 mm and a weight of up to 45.92 g.

The distribution and total number of dimples are not critical although 300 to 550 dimples, preferably 350 to 540 dimples are generally formed on a ball. Preferred dimple

Exhibit 5

IN UNITED STATES DISTRICT COURT
DISTRICT OF DELAWARE

BRIDGESTONE SPORTS CO., LTD., AND BRIDGESTONE GOLF, INC., ***Plaintiffs,*** ***v.*** **ACUSHNET COMPANY,** ***Defendant.***	C.A. No. 05-132(JJF)

PLAINTIFFS' EIGHTH SUPPLEMENTAL RESPONSES TO DEFENDANT'S FIRST SET OF INTERROGATORIES

Pursuant to Rule 33 of the Federal Rules of Civil Procedure, Plaintiffs Bridgestone Sports Co., Ltd., and Bridgestone Golf, Inc., (individually or collectively "Bridgestone") hereby supplements its responses to Defendant's First Set of Interrogatories to Plaintiff.

GENERAL OBJECTIONS

The General and Specific Objections set forth in Plaintiff's: First Responses to Defendant's First Set of Interrogatories; Plaintiff's First Supplemental Responses to Defendant's First Set of Interrogatories; Plaintiff's Second Supplemental Responses to Defendant's First Set of Interrogatories; Plaintiff's Third Supplemental Responses to Defendant's First Set of Interrogatories; and Plaintiff's Fourth Supplemental Responses to Defendant's First Set of Interrogatories; Plaintiff's Fifth Supplemental Responses to Defendant's First Set of Interrogatories; and Plaintiff's Sixth Supplemental Responses to Defendant's First Set of Interrogatories, are incorporated herein by reference.

Bridgestone reserves the right to later amend or supplement its contentions after further investigation and discovery and after the Court construes the claims.

Subject to, and without waiving, any of the General and Specific Objections, Bridgestone hereby supplements its responses to Interrogatory Nos. 6 and 21.

OBJECTIONS AND RESPONSES

INTERROGATORY NO. 6

Identify on a claim-by-claim basis, for each claim of the Bridgestone Patents identified in your responses to interrogatory No. 1 above, any alleged dates of conception; any alleged subsequent diligence until reduction to practice; any alleged dates of actual reduction to practice of the claimed invention; any written descriptions or drawings of the claimed invention prepared prior to the filing date; the date of the first constructive reduction to practice of the subject matter defined by the claim; the names, titles, and place of work (at the time of their involvement and current) of all persons who were involved in connection with such conception, diligence, or reduction to practice; and the earliest effective filing date Bridgestone will assert for each such claim. State in detail all factual bases supporting Bridgestone's identification of each such date, and identify all persons, documents, and tangible things corroborating each such date.

RESPONSE TO INTERROGATORY NO. 6

In addition to the General Objections, Bridgestone objects to the interrogatory as being a multiple and compound request constituting more than one interrogatory. Bridgestone also objects to the interrogatory as being overly broad, unduly burdensome, oppressive, not being limited in subject matter and/or scope to issues in the case, and seeking information that is neither relevant to this case nor reasonably calculated to lead to the discovery of admissible evidence.

Subject to and without waiving the general and specific objections, Bridgestone will produce, pursuant to Fed. R. Civ. P. 33(d), non-privileged documents responsive to the interrogatory sufficient to permit Acushnet to determine an answer as readily as Bridgestone.

In addition, Bridgestone further supplements its previous responses as follows:

U.S. Patent No. 5,252,652

For any claim of the '652 patent, the earliest effective U.S. filing date Bridgestone will assert for purposes of the instant action is May 10, 1990, which is the filing date on the face of the '652 patent.

For any claim of the '652 patent, the earliest date of invention Bridgestone will assert for purposes of the instant action is May 11, 1989, based on JP 1-118460.

Pursuant to Fed. R. Civ. Pro. 33(d), Bridgestone further responds in view of BSP 202885-202916.

U.S. Patent No. 5,553,852

For any claim of the '852 patent, the earliest effective U.S. filing date Bridgestone will assert for purposes of the instant action is Jul. 8, 1994, which is the filing date on the face of the '852 patent.

For any claim of the '852 patent, the earliest date of invention Bridgestone will assert for purposes of the instant action is July 8, 1993, based on JP 5-193065.

Pursuant to Fed. R. Civ. Pro. 33(d), Bridgestone further responds in view of BSP 203021-203070.

U.S. Patent No. 5,695,413

For any claim of the '413 patent, the earliest effective U.S. filing date Bridgestone will assert for purposes of the instant action is Apr. 19, 1996, which is the filing date on the face of the '413 patent.

For any claim of the '413 patent, the earliest date of invention Bridgestone will assert for purposes of the instant action is April 26, 1995, based on JP 7-125966.

Pursuant to Fed. R. Civ. Pro. 33(d), Bridgestone further responds in view of BSP 203128-203164.

U.S. Patent No. 5,743,817

For the claims of the '817 patent, the earliest effective U.S. filing date Bridgestone will assert for purposes of the instant action is Sep. 29, 1995, which is the filing date on the face of the '817 patent.

For the claims of the '817 patent, the earliest dates of invention Bridgestone will assert for purposes of the instant action is October 14, 1994, based on JP 6-276109.

Pursuant to Fed. R. Civ. Pro. 33(d), Bridgestone further responds in view of BSP 203200-203250.

U.S. Patent No. 5,782,707

For any claim of the '707 patent, the earliest effective U.S. filing date Bridgestone will assert for purposes of the instant action is Mar. 10, 1997, which is the filing date on the face of the '707 patent.

For any claim of the '707 patent, the earliest date of invention Bridgestone will assert for purposes of the instant action is March 11, 1996, based on JP 8-082121.

Pursuant to Fed. R. Civ. Pro. 33(d), Bridgestone further responds in view of BSP 203287-203342.

U.S. Patent No. 5,803,834

For any claim of the '834 patent, the earliest effective U.S. filing date Bridgestone will assert for purposes of the instant action is Feb. 27, 1997, which is the filing date on the face of the '834 patent.

For any claim of the '834 patent, the earliest date of invention Bridgestone will assert for purposes of the instant action is March 1, 1996, based on JP 8-071135.

Pursuant to Fed. R. Civ. Pro. 33(d), Bridgestone further responds in view of BSP 203371-203415.

U.S. Patent No. 5,813,924

For any claim of the '924 patent, the earliest effective U.S. filing date Bridgestone will assert for purposes of the instant action is the Sept. 29, 1995 filing date of the '817 patent, which is indicated to be the parent of the '924 patent on its face.

For any claim of the '924 patent, the earliest date of invention Bridgestone will assert for purposes of the instant action is October 14, 1994, based on JP 6-276109.

Pursuant to Fed. R. Civ. Pro. 33(d), Bridgestone further responds in view of BSP 203200-203250 and 203436-203458.

U.S. Patent No. 6,634,961

For any claim of the '961 patent, the earliest effective U.S. filing date Bridgestone will assert for purposes of the instant action is May 30, 2002, which is the filing date on the face of the '961 patent.

For any claim of the '961 patent, the earliest date of invention Bridgestone will assert for purposes of the instant action is May 30, 2001, based on JP 2001-163238.

Pursuant to Fed. R. Civ. Pro. 33(d), Bridgestone further responds in view of BSP 203488-203520 and 203578-203606.

U.S. Patent No. 6,679,791

For any claim of the '791 patent, the earliest effective U.S. filing date Bridgestone will assert for purposes of the instant action is June 15, 2001, which is the filing date on the face of the '791 patent.

For any claim of the '791 patent, the earliest date of invention Bridgestone will assert for purposes of the instant action is June 26, 2000, based on JP 2000-190640.

Pursuant to Fed. R. Civ. Pro. 33(d), Bridgestone further responds in view of BSP 203656-203698.

U.S. Patent No. 6,780,125

For any claim of the '125 patent, the earliest effective U.S. filing date Bridgestone will assert for purposes of the instant action is September 11, 1997, which is the filing date of Provisional Application 60/058,563, from which the '125 patent claim priority on its face.

For any claim of the '125 patent, the earliest date of invention Bridgestone will assert for purposes of the instant action is August 11, 1997, based on JP 9-228902.

Pursuant to Fed. R. Civ. Pro. 33(d), Bridgestone further responds in view of BSP 203787-203870.

Bridgestone's indications of earliest effective filing date, earliest effective US filing date, and earliest date of invention for each patent are based on the current invalidity assertions of Acushnet, and therefore may not accurately reflect the earliest possible date to which Bridgestone is entitled to rely in this or other actions.

Further, Bridgestone's investigation is ongoing. Therefore, Bridgestone reserves the right to amend or supplement its response after further investigation, and based on positions taken by, or contentions of, Acushnet.

Exhibit 6

THIS EXHIBIT HAS BEEN REDACTED IN ITS ENTIRETY

Exhibit 7

THIS EXHIBIT HAS BEEN REDACTED IN ITS ENTIRETY

Exhibit 8

Merriam-Webster's Collegiate® Dictionary

TENTH EDITION

Merriam-Webster, Incorporated
Springfield, Massachusetts, U.S.A.

A GENUINE MERRIAM-WEBSTER

The name *Webster* alone is no guarantee of excellence. It is used by a number of publishers and may serve mainly to mislead an unwary buyer.

Merriam-Webster™ is the name you should look for when you consider the purchase of dictionaries or other fine reference books. It carries the reputation of a company that has been publishing since 1831 and is your assurance of quality and authority.

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1. English language—Dictionaries. I. Merriam-Webster, Inc.
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423—dc21 97-41846
CIP

Made in the United States of America

28293031RRT:WC00

piece of paper 3 : a young and slender person ⟨a ~ of a girl⟩ 4 : a long seat or narrow pew

²slip *vt* slipped; slip·ping (1530) : to take cuttings from (a plant) : divide into slips ⟨~ a geranium⟩

³slip *n* [ME *slyp* slime, fr. OE *slypa* slime, paste; akin to OE *slūpan* to slip — more at SLEEVE] (1640) : a mixture of finely divided clay and water used by potters (as for casting or decorating wares or in cementing separately formed parts)

slip·case \'slip-ˌkās\ *n* (ca. 1925) : a protective container for books or magazines that has one open end — slip-cased \-ˌkāst\ *adj*

slip·cov·er \'slip-ˌkə-vər\ *n* (1886) : a cover that may be slipped off and on; *specif* : a removable covering for an article of furniture

slip·form \'slip-ˌfȯrm\ *vt* (1962) : to construct with the use of a slip form

slip form *n* (1949) : a form that is moved slowly as concrete is placed during construction (as of a building or pavement)

slip·knot \'slip-ˌnät\ *n* (1659) : a knot that slips along the rope or line around which it is made; *esp* : one made by tying an overhand knot around the standing part of a rope — see KNOT illustration

slip noose *n* (1847) : a noose with a slipknot

slip–on \'slip-ˌȯn, -ˌän\ *n* (1815) : an article of clothing that is easily slipped on or off; as a : a glove or shoe without fastenings b : a garment (as a girdle) that one steps into and pulls up c : PULLOVER

slip·over \-ˌō-vər\ *n* (1917) : a garment or cover that slips on and off easily; *specif* : a pullover sweater

slip·page \'sli-pij\ *n* (1850) 1 : an act, instance, or process of slipping 2 : a loss in transmission of power; *also* : the difference between theoretical and actual output (as of power)

slipped disk *n* (1942) : a protrusion of one of the cartilage disks between vertebrae with pressure on spinal nerves resulting in low back pain or sciatic pain

¹slip·per \'sli-pər\ *adj* [ME, fr. OE *slipor*; akin to MLG *slipper* slippery, *slippen* to slip] (bef. 12c) *chiefly dial* : SLIPPERY

²slipper *n* [ME, fr. *slippen* to slip] (15c) : a light low-cut shoe that is easily slipped on the foot — slip·pered \-pərd\ *adj*

slip·pery \'sli-p(ə-)rē\ *adj* slip·per·i·er; -est [alter. of ME *slipper*] (ca. 1500) 1 a : causing or tending to cause something to slide or fall ⟨~ roads⟩ b : tending to slip from the grasp 2 : not firmly fixed : UNSTABLE 3 : not to be trusted : TRICKY — slip·per·i·ness *n*

slippery elm *n* (1748) : a large-leaved elm (*Ulmus rubra* syn. *U. fulva*) of eastern No. America that has hard wood and fragrant mucilaginous inner bark; *also* : the bark

slip·py \'sli-pē\ *adj* slip·pi·er; -est (1548) : SLIPPERY

slip ring *n* [²*slip*] (1898) : one of two or more continuous conducting rings from which the brushes take or to which they deliver current in a generator or motor

slip–sheet \'slip-ˌshēt\ *vt* (ca. 1909) : to insert slip sheets between (newly printed sheets)

slip sheet *n* [²*slip*] (1903) : a sheet of paper placed between newly printed sheets to prevent offsetting

slip·shod \'slip-ˌshäd\ *adj* [²*slip*] (1580) 1 a : wearing loose shoes or slippers b : down at the heel : SHABBY 2 : CARELESS, SLOVENLY

slip·slop \-ˌsläp\ *n* [redupl. of ²*slop*] (1675) 1 *archaic* : watery food : SLOPS 2 *archaic* : shallow talk or writing — slip–slop *adj*

slip·sole \-ˌsōl\ *n* (ca. 1908) 1 : a thin insole 2 : a half sole inserted between the insole or welt and the outsole of a shoe to give additional height — called also *slip ton*

slip stitch *n* (ca. 1882) 1 : a concealed stitch for sewing folded edges (as hems) made by alternately running the needle inside the fold and picking up a thread or two from the body of the article 2 : an unworked stitch; *esp* : a knitting stitch that is shifted from one needle to another without knitting it

²slip·stream \'slip-ˌstrēm\ *n* (1913) 1 : a stream of fluid (as air or water) driven aft by a propeller 2 : an area of reduced air pressure and forward suction immediately behind a rapidly moving vehicle

²slipstream *vi* (1957) : to drive in the slipstream of a vehicle

slip·up \'slip-ˌəp\ *n* (1854) 1 : MISTAKE 2 : MISCHANCE

slip up *vi* (1909) : to make a mistake : BLUNDER

slip·ware \'slip-ˌwar, -ˌwer\ *n* (1883) : pottery coated with slip to improve or decorate the surface

slip·way \-ˌwā\ *n* (1840) : an inclined usu. concrete surface for a ship being built or repaired

¹slit \'slit\ *n* [ME, fr. *slitten*] (12c) : a long narrow cut or opening — slit *adj* — slit·less \'slit-ləs\ *adj*

²slit *vt* slit; slit·ting [ME *slitten*; akin to MHG *slitzen* to slit, OHG *slīzan* to tear apart, OE *sceli* shell — more at SHELL] (14c) 1 a : to make a slit in b : to cut off or away : SEVER c : to form into a slit 2 : to cut into long narrow strips — slit·ter *n*

slith·er \'sli-thər\ *vb* [ME *slidderen*, fr. OE *slidrian*, freq. of *slīdan* to slide] *vi* (bef. 12c) 1 : to slide on or as if on a loose gravelly surface 2 : to slip or slide like a snake ~ *vt* : to cause to slide

slith·ery \'sli-thə-rē\ *adj* (ca. 1825) : having a slippery surface, texture, or quality

slit trench *n* (1942) : a narrow trench esp. for shelter in battle from bomb and shell fragments

ˈsliv·er \'sli-vər, *2 is usu* 'sli-\ *n* [ME *slivere*, fr. *sliven* to slice off, fr. OE *-slīfan*; akin to OE *-klīfan* to cut] (14c) 1 a : a long slender piece cut or torn off : SPLINTER b : a small and narrow portion ⟨a ~ of land⟩ c : PARTICLE, SCRAP ⟨not a ~ of evidence⟩ 2 : an untwisted strand or rope of textile fiber produced by a carding or combing machine and ready for drawing, roving, or spinning

²sliv·er \'sli-vər\ *vb* sliv·ered; sliv·er·ing \'sli-və-riŋ, 'sliv-riŋ\ *vt* (1605) : to cut into slivers : SPLINTER ~ *vi* : to become split into slivers

sliv·o·vitz \'sli-və-ˌvits, 'slē-, -ˌwits\ *n* [Serbo-Croatian *šljivovica*, fr. *šljiva, sliva* plum; akin to Russ *sliva* plum — more at LIVID] (1885) : a dry usu. colorless plum brandy made esp. in the Balkan countries

slob \'släb\ *n* [ir *slab* mud, ooze, slovenly person] (1861) : a slovenly or boorish person — slob·bish \'slä-bish\ *adj* — slob·by \-bē\ *adj*

¹slob·ber \'slä-bər\ *vb* slob·bered; slob·ber·ing \-b(ə-)riŋ\ [ME *slobberen* to eat in a slovenly manner; akin to LG *slubberen* to sip] *vt* (1733) 1 : to let saliva dribble from the mouth : DROOL 2 : to indulge the feelings effusively and without restraint ~ *vt* : to smear with or as if with dribbling saliva or food — slob·ber·er \-bər-ər\ *n*

²slobber *n* (ca. 1755) 1 : saliva drooled from the mouth 2 : drivelingly, or incoherent utterance — slob·bery \'slä-b(ə-)rē\ *adj*

slloe \'slō\ *n* [ME *slo*, fr. OE *slāh*; akin to OHG *slēha* sloe and prob. Russ *slíva* plum — more at LIVID] (bef. 12c) : the small dark glo tringent fruit of the blackthorn; *also* : BLACKTHORN

sloe–eyed \'slō-ˌīd\ *adj* (1857) 1 : having soft dark bluish or black eyes 2 : having slanted eyes

sloe gin *n* (1895) : a sweet reddish liqueur consisting of grain spi vored chiefly with sloes

¹slog \'slägˌ *vb* slogged; slog·ging [origin unknown] *vt* (1824) hard : BEAT 2 : to plod (one's way) perseveringly esp. against ty ~ *vi* 1 : to plod heavily : TRAMP ⟨*slogged* through the snow⟩ work hard and steadily : PLUG — slog·ger *n*

²slog *n* (1888) 1 : hard persistent work 2 : a hard dogged tramp

slo·gan \'slō-gən\ *n* [alter. of earlier *slogorn*, fr. ScGael *sluagh* fr. *sluagh* army, host + *gairm* cry] (1513) 1 a : a war cry or rallying esp. of a Scottish clan b : a word or phrase used to express a teristic position or stand or a goal to be achieved 2 : a brief att getting phrase used in advertising or promotion

slo·gan·eer \'slō-gə-'nir\ *n* (1922) : a maker or user of slogan gunner *vt*

slo·gan·ize \'slō-gə-ˌnīz\ *vt* -ized; -iz·ing (1926) : to express as a

sloop \'slüp\ *n* [D *sloep*] (1629) : a fore-and-aft rigged boat with mast and a single jib

sloop of war (1704) : a small warship with guns on only one deck

²slop \'släp\ *n* [ME *sloppe*, prob. fr. MD *slop*; akin to OE *oferslyppe*] (14c) 1 : a loose smock or overall 2 *pl* : short full worn by men in the 16th century 3 *pl* : articles (as clothing) sold to sailors

³slop *n* [ME *sloppe*] (15c) 1 : soft mud : SLUSH 2 : thin tasteless or liquid food — usu. used in pl. 3 : liquid spilled or splashed : food waste (as garbage) fed to animals : SWILL 2a b : excrement waste — usu. used in pl. 5 : sentimental effusiveness in speech ing : GUSH

⁴slop *vb* slopped; slop·ping *vt* (1557) 1 a : to spill from a con : to splash or spill liquid on c : to cause (a liquid) to splash 2 : to eat messily 3 : to eat or drink greedily or noisily 4 : to feed slop to ⟨~ the hogs⟩ ~ *vi* 1 : to tramp in mud or slush 2 : to become or splashed 3 : to be effusive : GUSH 4 : to pass beyond or boundary or limit

slop basin *n* (1731) *Brit* : SLOP BOWL

slop bowl *n* (1810) : a bowl for receiving the leavings of tea or cups at table

slop chest *n* [*slop*] (1840) : a store of clothing and personal (as tobacco) carried on merchant ships for issue to the crew charge against their wages

¹slope \'slōp\ *adj* [ME *slope*, adv., obliquely] (1502) : that slan ING — often used in combination ⟨*slope*-sided⟩

²slope *vb* sloped; slop·ing *vt* (1591) 1 : to take an oblique : to lie or fall in a slant : INCLINE 3 : GO, TRAVEL ⟨~ off night —Wolcott Gibbs⟩ ~ *vt* : to cause to incline or slant — slop

³slope *n* (ca. 1611) 1 : upward or downward slant or inclination gree of slant 2 : ground that forms a natural or artificial in : the part of a continent draining to a particular ocean ⟨Alaska's *Slope*⟩ 4 a : the tangent of the angle made by a straight line x-axis b : the slope of the line tangent to a plane curve at a

slope–intercept form *n* (ca. 1942) : the equation of a straight line form $y = mx + b$ where m is the slope of the line and b is the the y-axis through which the line passes

slo–pitch \'slō-ˌpich, -ˌpich\ *n* [alter. of *slow pitch*] (1967) : SLOW

slop jar *n* (1855) : a large pail used as a chamber pot or to receive water from a washbowl or the contents of chamber pots

slop pail *n* (1864) : a pail for toilet or household slops

slop·py \'slä-pē\ *adj* slop·pi·er; -est (1707) 1 a : wet so as to easily : SLUSHY ⟨a ~ racetrack⟩ b : wet or smeared with or as something slopped over 2 : SLOVENLY, CARELESS ⟨a ~ dresser ~ work⟩ 3 : disagreeably effusive ⟨~ sentimentalism⟩ — slop \'slä-pə-lē\ *adv* — slop·pi·ness *n*

sloppy joe \-ˌjō\ *n* [prob. fr. the name *Joe*, nickname for *Joseph*] (196 : ground beef cooked in a thick spicy sauce and usu. served on a

slop·work \'slä-pˌwərk\ *n* (1849) 1 : the manufacture of cheap made clothing 2 : hasty slovenly work

¹slosh \'slälsh, 'slōsh\ *n* [prob. blend of *slop* and *slush*] (1814) 1 : 2 : the slap or splash of liquid

²slosh *vi* (1844) 1 : to flounder or splash through water, mud, 2 : to move with a splashing motion ⟨the water ~*ed* around his Alcine⟩ ~ *vt* 1 : to splash about in liquid 2 : to splash about or on something 3 : to splash with liquid

sloshed \'slälsht, 'slōsht\ *adj* (ca. 1946) *slang* : DRUNK, INTOXICATED

¹slot \'slät\ *n* [ME, the hollow running down the middle of the breast, MF *esclot*] (1523) 1 a : a narrow opening or groove : SLIT, NOTCH ⟨a mail ~ in a door⟩ b : a narrow passage or enclosure c : a passage through the wing of an airplane or of a missile that is located usu. the leading edge and formed between a main and an auxiliary air for improving flow conditions over the wing so as to increase stall delay stalling of the wing 2 : a place or position in an organization or sequence : NICHE 3 : SLOT MACHINE 4 : a gap between an end and tackle in an offensive football line

²slot *vt* slot·ted; slot·ting (1747) 1 : to cut a slot in 2 : to place in or assign to a slot

³slot *n, pl* slot [MF *esclat* track] (1575) : the track of an animal (as a deer)

slot·back \'slät-ˌbak\ *n* (1959) : an offensive football halfback who lines up just behind the slot between an offensive end and tackle

slot car *n* (1966) : an electric toy racing car with a pin underneath that fits into a groove on a track for guidance

sloth \'slōth, 'slōth *also* 'slōth\ *n, pl* sloths \with ths *or* th\ [ME *slouthe*, fr. *slow* slow] (12c) 1 a : disinclination to action or labor : INDOLENCE b : spiritual apathy and inactivity ⟨the deadly sin of ~⟩

sloth 2

ary of the slow-moving arboreal edentate mam ...ceras (*Bradypus* and *Choloepus*), inhabit tro ...Central America, hang from the branches ba ...on leaves, shoots, and fruits — compare TO

TOED SLOTH

...ful \'slōth-fəl, 'slāth- *also* 'slōth-\ *adj* (15c) : in ...ENT *syn* see LAZY — sloth·ful·ly \-fə-lē\ *adv* · ...chine *n* (1891) 1 : a machine whose operatic ...according to the matching of symbols on whee ...called also *one-armed bandit*

...racing *n* (1965) : the racing of slot cars — slot ...\'slaüch\ *n* [origin unknown] (1515) 1 a : ...: b : one that is unimpressive; *esp* : a lazy or ...used in negative constructions ⟨was no ~ at cor ...ure characterized by an ungainly stooping of t ...or excessive relaxation of body muscles

...ch *vi* (1754) 1 : to walk, stand, or sit with a ...ouch 2 : DROOP ~ *vt* : to cause to droop ⟨~e ...outh·er *n*

...hat *n* (1837) : a soft usu. felt hat with a wide ...ouch·i·ly \-chə-lē\ *adv* — slouch·i·ness ...ulness (as in form or posture) ⟨a ~ sweater⟩ ...ly — slouch·i·ly \-chə-lē\ *adv* — slouch·i·ness ...ough \'slü, 'sləü; *in the US (exc NewEng)* 'slü *is u* ...to whom the sense is familiar; *Brit usu* 'sləü *fo* ...f. OE *slōh*; akin to MHG *slouche* ditch] (bef ...deep mud or mire b (1) : SWAMP (2) : an i ...WATER (3) : a creek in a marsh or tide flat ...ation or spiritual dejection — sloughy \-ē\ ...gh *vt* (1846) : to engulf in a slough ~ *vi* : to p ...mud : SLOG

...gh \'slaf, *also* sluff *n* [ME *slughe*; akin to MH ...1 : the cast-off skin of a snake 2 : a mass of ...from an ulcer 3 : something that may be shed ...gh \'slaf, *also* sluff *vt* (1720) 1 a : to become ...off one's skin c : to separate in the form ...tissue 2 : to crumble slowly and fall away ...to get rid of or discard as irksome, objection ... — usu. used with *off* b : to dispose of (a lc ...discarding *syn* see DISCARD

...d of despond \,slaü-əv-di-'spänd, ,slä-\ [fr. th ...ng into which Christian falls on the way fr ...tion and from which Help saves him in th ...per (1678) by John Bunyan] (1776) : a state of

...k \'slō-ˌväk, -ˌvak\ *n* [Slovak *slovák*] (1829) ...people of Slovakia 2 : the Slavic language ...k *adj* — Slo·va·kī·an \slō-'vä-kē-ən, slə-...

...n \'slō-vən\ *n* [ME *sloveyn* rascal, perh. fr. Fle ...character] (15c) : one habitually negligent of ...esp. in personal appearance

...*adj* (1815) : SLOVENLY

...ne \'slō-ˌvēn\ *n* [G *Slowene* fr. Slovene *Slo* ...t of a Slavic people living largely in Sloven ...the Slovenes — Slovene *adj* — Slo·ve·nian \

...ly \'slə-vən-lē *also* 'slō-\ *adj* (ca. 1568) 1 a ...appearance b : lazily slipshod ⟨~ in thoug ...sloven ⟨~ habits⟩ — slo·ven·li·ness *n* —

...\'slō\ *adj* [ME, fr. OE *slōw*; akin to OHG *slēo* ...ally dull : STUPID ⟨a ~ student⟩ b : natur ...ing in readiness, promptness, or willingn ...ate ⟨was ~ to anger⟩ 3 a : moving, flo ...ined speed or at less than usual speed ⟨traffic v ...e marked by low speed ⟨he moved with ~ d ...⟨a ~ disease⟩ d : LOW, GENTLE ⟨~ fire⟩

...GRADUAL ⟨a ~ recovery⟩ 5 : having qualit ...ness or action ⟨a ~ track⟩ 6 a : registering b ...rrect ⟨the clock is ~⟩ b : less than the time ...ind of reckoning c : that is behind the time s ...*vt* a : lacking in life, animation, or gaiety : ...reduced sales or patronage ⟨business was ~⟩ ...— slow-ness *n*

...(15c) : SLOWLY

...some commentators claim that careful writ ...to spite of the fact that it has had over fou ...e a continent forbearance till the speed of ...k.). In actual practice, *slow* and *slowly* are ...way. *Slow* is almost always used with verb ...or action, and it regularly follows the veri ...best cooked long and *slow* —Louise Prot ...the verb ⟨a sense of outrage, which *slowl* ...ening⟩ and with participial adjectives ...ness . . . of the problem —*Amer. Labor*⟩. ...where *slow* might also be used ⟨burn *slow* ...where *slow* would be unidiomatic ⟨the lead ...bombing as a means of striking back —D ...n (1557) : to make slow or slower : slacken th ...used with *down* or *up* ~ *vi* : to go or bec ...new cars ~*ed* sharply⟩ *syn* see DELAY

...down \'slō-ˌdaün\ *n* (1897) : a slowing down ...ot·ed \-ˌfü-təd\ *adj* (1642) : moving at a ve ...~ novel⟩ ⟨a ~ ship⟩ — slow–foot·ed·n ...ly \-lē\ *adv* (13c) : in a slow manner : not quic ...*usage* see SLOW

...match *n* (ca. 1802) : a match or fuse made so ...and used for firing (as of blasting charges)

...otion \'slō-'mō-shən\ *adj* (1923) : of, ...picture or video photography in which the ...amplified is made to appear to occur slower ...⟨a ~ replay⟩; *also* : slowly moving ⟨a ~ d

...motion *n* (1924) : slow-motion photography

Exhibit 9

NASA NEWS

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John Ira Petty
Johnson Space Center
(281) 483-2530

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NASA SCIENTIST MAKES SCIENCE AND MATH ACCESSIBLE

NASA math whiz and computer software designer Robert O. Shelton considers himself lucky, e though he lost his sight when he was 11-years-old. He felt lucky to have parents and teachers spotted his talent in mathematics and science, encouraged him, and provided tools that helped pursue his interest.

Shelton was born with congenital glaucoma, a disease that is usually treatable with today's last technology but was hard to cure in the 1950s, when Shelton was a child. After suffering through operations, he said, "It was almost a relief to lose my sight and have it over with."

"Before I lost my sight, I was a smart kid, but rather sloppy," Shelton said. "My mother told me, going to have to use different muscles now -- the ones between your ears." She was tough on r said I could do whatever I wanted, but I would have to work even harder because I was blind," added.

As a child in Houston, Shelton enjoyed working with his father, an electrical engineer, tinkering family garage, building things and tearing them apart to see how they worked. After losing his s continued that trend in a new way -- learning mathematical equations and scientific laws that e things work. His teachers helped him study advanced mathematics and science and taught him visualize concepts in his mind.

Shelton earned bachelor's, master's and doctorate degrees in mathematics from Rice Universit Houston in 1971, 1973 and 1975, respectively. While at Rice, he was a graduate intern at the J Space Center (JSC), Houston. He worked with computer scientists and engineers designing th navigation system for the Space Shuttle.

"NASA has always been committed to hiring individuals with disabilities," Shelton said. "They p me with the help and technology I needed to do the job, and made it seem simple."

When NASA offered him a job working on artificial intelligence systems in 1987, Shelton, his wi four children returned to Texas. He joined the JSC Software Technology Branch, designing cor technology used to analyze data sent from the Space Shuttle to the Mission Control Center in H

Shelton uses his math and computer expertise to head up JSC's contributions to NASA's Learn Technologies Project. He works on technology tools for teachers and students in kindergarten t 12th grade. The tools are available through Web sites, and Shelton's leadership has ensured s accessible to students with disabilities.

"I want blind and sighted students who use the site to find out what they can do," Shelton said. teachers to have easy-to-use, cutting-edge technology tools that make math and science acce students. Most importantly, I want employers to emulate NASA by hiring blind people and using talents," he added.

Shelton believes using NASA technology and know-how to reach people with disabilities is a na match. Improved technology, such as synthetic speech software that reads content, has helpec

more independent as he works.

The Web site is filled with appealing activities: students can build, test and run a remotely contr in simulated environments and compete in skill-based games against other students around th The site also offers software tools that make it easier for teachers to manage information relate science and math curricula. Shelton's creative team is working on a new product that will be av soon: a graphing tool to make NASA science and math activities accessible to people who can' uses tones to help blind people visualize graphs and mathematic concepts.

According to Shelton the unemployment rate for blind people is high and many who are employ working at jobs that fully use their education or potential. He hopes the NASA Web site will help learn valuable skills to improve employment prospects.

Media organizations interested in interviewing Shelton should contact John Ira Petty, JSC Publ at: (281)483-5111.

To access the NASA Learning Technologies Project on the Internet, visit:

http://prime.jsc.nasa.gov

Exhibit 10

THIS EXHIBIT HAS BEEN REDACTED IN ITS ENTIRETY

Exhibit 11

THIS EXHIBIT HAS BEEN REDACTED IN ITS ENTIRETY

Exhibit 12

THIS EXHIBIT HAS BEEN REDACTED IN ITS ENTIRETY

Exhibit 13

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